36

NANDISH ASSOCIATES

ARCHITECTS AND ENGINEERING CONSULTANTS

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REF. :

DATE :

BRUHATH BANGALORE MAHANAGARA PALIKE

Name of the Project: Providing Structural roof covering (By space frames) over gallery to Hoysala Play Ground behind Yelahanka New Town Bus Stand in Ward No.04.

ABSTRACT OF ESTIMATE

Sl .N	DESCRIPTION OF WORK	Amount in Rs.
1	Kal Zip Roofing	24207500.00
2	Civil Works	3485000.00
3	Electrical Works	1310000.00
	SUB TOTAL	**29002500.00**
4	Professional Charges @ 3% + Service Tax @ 14.5%	996236.00
5	Miscelleneous	1264.00
	GRAND TOTAL	**Rs. 30000000.00**

for NANDISH ASSOCIATES

(K C NANDISH)

NANDISH ASSOCIATES ARCHITECTS ENG. CONSULTANTS

Assistant Engineer
Project Sub Division
Yelahanka Zone, BBMP

Assistant Executive Engineer
Project Sub Division
Yelahanka Zone, BBMP

Executive Engineer
Project Division
Yelahanka Zone, Bangalore

21/6/16

Technical Sanction
Accorded For 300.00 lakh Rs.
Head of A/C P3089
CER NO : 17 Dt: 08.07.16

TA CE (YNK)

ADMINISTRATIVELY SANCTIONED FOR Rs 3,00 Lakhs

Rupees Three Crores only

Under CMC Grants 2014-15

Registered as EE ( ) No. 3 ...9....

Subject to conditions contained in enclosed memo EE ( ) No. /9/...

Dt. Technical Sanctioned

J.C(Y)RO/AS/89/16-17

dated 22-6-2016 3,00 Crores

Joint Commissioner
(Yelahanka Zone)
BBMP, Bengaluru-92

34.

BRUHAT BANGALORE MAHANAGARA PAILKE

Name of the Project: Providing Structural roof covering (By space frames) over gallery to Hoysala Play Ground behind Yelahanka New Town Bus Stand in Ward No.04.

(KALZIP ROOFING SYSTEM) Rs.2,42,07,500.00

S.N	DESCRIPTION OF WORK	N	L	B	D	QTY	UNIT	RATE	AMOUNT
1	Supply and fixing of Single Skin Kalzip roofing systems of 65/400, 0.9mm thick Aluminium Standing seam roof sheets. The sheets comprise of Profiled sheeting of Aluminium self-supported standing seam roof system manufactured from Aluminium alloy AA 3004, minimum material thickness of 0.9mm and PVDF finishing RAL 9006 on the exposed surface with ST Clips and necessary accessories. Structure:(i) Supplying, Cutting, Bending and Fabricating hot rolled plates, sag rods, brackings and connection Bolts to form a Column, truss with Base Plates and purlins. (ii) Erection of the above truss work structure at required height. (iii) Providing and applying one coat of red oxide primer and two coats of synthetic enamel paint. The scope of work includes a) Design, Engineering, Fabrication and erection of steel structure, roof sheeting and facade system. b) Supply and installation of flashing, capping, screws and all other necessary accessories.(Approved Rates)								
	Northern Side	1	77.30	6.50		502.45			
	Western Sude upper reach	1	37.70	6.50		245.05			
	Wesrern side lower reach	1	56.70	6.50		368.55			
	Pavillion side	1	40.75	11.70		476.78			
	1592.83 x1.15%=18.31					18.31			
						1611.14	Sqmt	**15025.00**	**24207303.38**
2	Miscelleneous								196.62
						ROUNDED TO			**24207500.00**

(RUPEES TWO CRORES FORTY TWO LAKHS SEVEN THOUSAND FIVE HUNDRED ONLY)

CERTIFICATES

1) The work spot has been inspected and found to be necessary
2) This estimate is prepared as per Approved Rates
3) The provisions were made in this estimate are necessary and adequate.
4) This works come under B.B.M.P. limits.
5) The work is not Split Up.

Assistant Engineer
Project Sub Division
Yelahanka Zone, BBMP

Assistant Executive Engineer
Project Sub Division
Yelahanka Zone, BBMP

Executive Engineer
Project Division
Yelahanka Zone, BBMP Bangalore
21/6/16

BRUHAT BANGALORE MAHANAGARA PAILKE

Name of the Project: Providing Structural roof covering (By space frames) over gallery to Hoysala Play Ground behind Yelahanka New Town Bus Stand in Ward No.04.

(CIVIL WORKS) Rs.34,85,000.00

S.N	DESCRIPTION OF WORK	UNIT	N	L	B	D	QTY	RATE	AMOUNT
1	Providing and laying cement concrete using 20mm and down size granite jelly of Ready Mixed Cement Concrete for Column Footings, M-20 (1:1.5:3) laid in 15 cms thick layers and well compated vibrating, curing, finishing with necessary cement mortar, pumping of concrete, with all lead and lifts, hire charges of machinaries, loading, unloading, levelling as per specification and direction of the Engineer-in-charge.compelte (exclusive of cost of steel and fabrication charges) with inclusive of all lead and lift and directions of the Engineer in charge of the work								
	S.R.page 18 item 4.49.1								
	Rising of Columns	Cum	26	0.30	0.45	1.00	3.51		
	Northern Side		10	0.30	0.45	1.00	1.35		
	Western Sude upper reach		6	0.30	0.45	1.00	0.81		
	Wesrern side lower reach		7	0.30	0.45	1.00	0.95		
	Southern Side		8	0.30	0.45	1.00	1.08		
	Eastern Side		10	0.30	0.45	1.00	1.35		
	Pavillion Side		12	0.30	0.60	1.00	2.16		
						Total Qty	11.21	6214.78	69636.61
	Basic Rate:	5863.00							
	Area Weightage @ 6%	351.78							
	Total	6214.78							
2	Providing and fixing 20mm thick gang saw water cut sadarhalli gray granite in CM 1:4 proportion, cut to required shape, pattern with paper joints, finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, groves in joints including cost of curing								
	S.R.page 109 item 14.61.1								
		Sqm							
	West side - treads and Risers		1	54.00	7.30		394.20		
	South side - treads and Riiser		1	70.00	9.00		630.00		
						Total Qty	1024.20	2047.92	2097479.66
	Basic Rate:	1932.00							
	Area Weightage @ 6%	115.92							
	Total	2047.92							
3	Providing chain link fencing 50mm size of 8 guage properly stretched between rectangular poles and fixed with suitable bolts & nuts, the free ends shall be welded to the pole and block pipe at top and bottom as required including cost of all materials, labour, lead and lifts and as per the directions of the Engineer-in-charge of work including two coats of approved quality paint over one coat of shop paint								
	S.R.page 255 item 37.3								
		Sqm							
For 90RL and 90.5 RL			1	71.00	3.00		213.00		
Bifurcation for skating and Basket ball			1	19.30	3.00		57.90		
						Total Qty	270.90	684.76	185501.48
	Basic Rate:	646.00							
	Area Weightage @ 6%	38.76							
	Total	684.76							

4	Providing and fixing M.S. Hand railing for Balcony/Staircase etc., with 50mm dia. M.S. hollow pipe of 14 gauge, welded to 20mmx20mm M.S. square rod placed vertically, spaced at 100mm at regular intervals of 600mm. These vertical rods laterally tied to 3 horizontal rods spaced at equal interval. These assembly is fixed to concrete by using expansion bolts and welding the same to reinforcement bars and making good the surface. All the joints and sections hould be cut to length, welded and grinded wherever necessary etc., complete . The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification and drawing								
	S.R.page 42 item 7.35								
		Sqm							
Gallery side			4	7.50		1.20	36.00		
VIP Gallery side			2	13.00		1.20	31.20		
						Total Qty	**67.20**	**2878.96**	**193466.11**
	Basic Rate:	2716.00							
	Area Weightage @ 6%	162.96							
	Total	**2878.96**							
5	Supplying and fixing M.S. Rectangular poles made out of 2 equal angles of 65x65x6 mm welded together and fixed in CC (1:2:4) WITH 2 NOS 16mm dia M.S. hold fast rods each of length 25 cms. Including cost of all materials cutting, bending scaffolding wherever necessary, nicely finishing the welded joints with all lead lifts and as per the directions of the Engineer-in - charge of the work and including providing 2 coats of approved quality paint over one coat of shop painting (excluding cost of earthwork and concrete)								
	S.R.page 255 item 37.2								
		Mtr							
			34			3.00	102.00		
						Total Qty	**102.00**	**973.08**	**99254.16**
	Basic Rate:	918.00							
	Area Weightage @ 6%	55.08							
	Total	**973.08**							
6	Providing and fixing M.S. Block pipe of 38mm dia, of heavy guage of 14 including removing the bends, cutting the pipe, and fixing pipe in between the two verticle poles (M.S. rectangular poles) and spot welding the chain link with M.S. block pipe including cost of all materials wastage in cutting, and scaffolding wherever necessary with all lead and lift as directed by the Engineer-in-charge of work etc., complete including two coats of approved quality paint over one coat of shop paint								
	S.R.page 255 item 37.4								
		Mtr							
For 90RL and 90.5 RL			4	71.00			284.00		
Bifurcation for skating and Basket ball			4	19.30			77.20		
						Total Qty	**361.20**	**331.78**	**119838.94**
	Basic Rate:	313.00							
	Area Weightage @ 6%	18.78							
	Total	**331.78**							
7	Providing precast Eurocon Tiles, Red colour for footpath 20mm thick using marble chips at 7-10 nominal size laid on bed CM 1:3 mix and jointed with red oxide cement slurry mixed pigment to match the shade to tiles, rubbing, polishing oxalic acid wash, wax polish included cost of materials and labhour. **(Data Rate copy enclosed)**								
Skating Rink		Sqm	2	35.00	2.40		168.00		
Skating Rink			2	15.00	2.40		72.00		
						Total Qty	**240.00**	**1250.00**	**300000.00**

8	Providing and fixing M.S. Grill over existing compound wall as per using 16mm x 16mm M.S. Square rod at 150mm c/c spacing and 6mm x 40mm M.S. flats at horizontal and 6mm x12mm M.S. flat for ornamental design and providing shop edge design at the vertex of every vertical rods, including welding, grinding wherever necessary. All the steel surface should be thoroughly cleaned free of rust and painted with anti corrosive paint (shop paint) etc., complete. The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification,								
	S.R.page 42 item 7.36								
Pavilion Front		Sqm	1	60.00		1.20	72.00		
							72.00	5789.72	416859.84
	Basic Rate:	5462.00							
	Area Weightage @ 6%	327.72							
	Total	5789.72							2963.19
9	Miscellenous Charges							L/s.	
					Total Amount				3485000.00

(RUPEES THIRTY FOUR LAKHS EIGHTY FIVE THOUSAND

CERTIFICATES

1) The work spot has been inspected and found to be necessary
2) This estimate is prepared as per KPWD SR. of 2015-16 & Approved Rates
3) The provisions were made in this estimate are necessary and adequate.
4) This works come under B.B.M.P. limits.
5) The work is not Spilt Up.

Assistant Engineer
Project Sub Division
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Executive Engineer
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Yelahanka Zone, BBMP Bangalore
21/6/16

BRUHAT BANGALORE MAHANAGARA PAILKE

Name of the Project: Providing Structural roof covering (By space frames) over gallery to Hoysala Play Ground behind Yelahanka New Town Bus Stand in Ward No.04.

(ELECTRICAL WORKS) Rs.13,10,000.00

Sl No	Description Of Work	Unit	Qty	RATE	Amount
	KPWD (Ele) S.R.2014-15				
1 2/2	Concealed Conduit System Supplying heavy gauge PVC conduit pipe .....mm dia .....mm thick confirming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary.b)25mm dia 2mm thick	Mtrs	700.00	57.00	**39900.00**
2 3/1.12	Supplying And Fixing Metal Fan Box with Round Hook.	Nos	18	92	**1656.00**
3 3/3	Supplying heavy gauge PVC Conduit Pipe ....dia .....mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. b)25mm dia 2mm thick	Mtrs	200.00	58	**11600.00**
4 3/1.6	Supplying and flush mounting teak wooden box without front plank, made of not less than 12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete.4)8"x6"x3" (203x152x76mm)	Nos	18	73	**1314.00**
	5)4"x4"x3" (101x101x76mm)		8	68	**544.00**
	7)3 to 4 Way	Nos	36	46.00	**1656.00**
5 17/3.9	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches, regulators etc., and fixing on existing wooden or metal box using N.F. screws.	Sq CM	18700.00	0.25	**4675.00**
6 16/3.7.A	Supplying and fixing of modular switch/ Socket/stepped electronic fan regulator/ dimmer/telephone socket etc on existing modular switch plate as per IS 3854 and IS 1293 GROUP A. 1)6Amps one way.	Nos	126	50.00	**6300.00**
	3)6Amps 3way socket.	Nos	54	77.00	**4158.00**
	4)Stepped Fan Regulator.	Nos	18	236.00	**4248.00**
	10)6/16Amps universal socket0	Nos	78	120.00	**9360.00**
	11)32Amps DP switch	Nos	78	134.00	**10452.00**
7 6/2.4	Point wiring using Copper wire without switch. Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2X1.5Sq.mm Cable confirming to the GTP without switch, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block complete for each outlet.GROUP A 1)Short point upto 3Mtr from tapping point to out let via switch box	Pts	18	144.00	**2592.00**

	2)Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch box	Pts	18	215.00	**3870.00**
	3)Long point above 6Mtr upto 10Mtr from tapping point to out let via switch box	Pts	36	334.00	**12024.00**
8 8/2.6	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper conductor single core wire in open or concealed system of wiring as per IS-694:1990 & confirming to GTP of GROUP -B.				
	2)1.5 sqmm	Mtrs	300.00	15.90	**4770.00**
	3)2.5 sqmm	Mtrs	200.00	24.90	**4980.00**
	4)4 sqmm	Mtrs	200.00	36.30	**7260.00**
	5)6 sqmm	Mtrs	1700.00	53.20	**90440.00**
9 17/3.11	Extra for supplying 4mm thick white plastic plate and covering for junction boxes of size .....mm conduit using necessary machine screws.80.mm	Nos	25	36.00	**900.00**
	110mm	Nos	11	18.00	**198.00**
10 19/3.15.B	Supplying and fixing/replacing of 6/16/32Amps electrical accessories on existing switch board. GROUP B196 Amps lamp holder	Nos	36	38.00	**1368.00**
11 20/4.6	Supplying patti type fluorescent tube light fitting of 4' - suitable for 28 watts fluorescent tube fitting, made out of M.S. Sheet and stove enameled with HF Electronic Ballast , locking type brass contact holders mounted on double fold type sheet base fully wired for use on 230 volts AC . Supply including T5 lamp.	Nos	44	669.00	**29436.00**
12 78/9.1	Supplying exhaust fan of 1440 RPM of 300mm (12") size with bracket blades complete for light duty suitable to operate on 230V 50Hz, AC Supply.	Nos	2	1700.00	**3400.00**
13 78/9.2	Supplying of 1440rpm heavy duty exhaust fan with bracket blades suitable to operate on 230V 50Hz, AC Supply complete.12" Sweep (300mm)	Nos	2	3654.00	**7308.00**
14 78/9.3.1.1	Supplying capacitor type ceiling fan complete with down rod blades, shackle, canopies etc., for operation on 230 volts, 50 cycles. Single phase AC supply conforming to ISS-374-1979 and with double ball bearing system. 48" Sweep (1200mm)	Nos	14	2376.00	**33264.00**
15 9.3.2	Supplying capacitor type ceiling fan complete with down rod blades, shackle, canopies etc., for operation on 230 volts, 50 cycles. Single phase AC supply conforming to ISS-374-1979 and with double ball bearing system. 56" Sweep (1400mm)	Nos	2	2418.00	**4836.00**
16 21/4.9	Supplying surface mounted type mirror optic luminaries for single/Twin 28watts fluorescent lamps cross rising of stove enameled deep coloured M.S.low profile housing complete with all accessories and high purity anodized aluminum reflector assembling along with cross louvers including necessary fluorescent tubes with Energy Saving Electronic Ballast.2x4'-28Watts	Nos	16	4028.00	**64448.00**

17 25/4.33. 2	Supply of 2'x2' LED recessed luminaire with ...Watts system wattage. Housing shall be with pressure die cast aluminum alloy with corrosion proof resistant polyester power coated. Driver operates with voltage range from 100V to 270V 50/60 Hz with short circuit, overload & mis-wiring protection. Lumen Maintenance of 70% at 50000 Hrs. Injection moulded poly carbonate diffuser for better mechanical stability, light transmission & avoid pot hole effect. Junction temperature shall be < 70 degree Celsius. Driver is on constant current driver @ 0.06A with PF > 0.92 with line voltage @ 220-240V @ 50/60Hz, driver efficiency > 85% & THD<15%. LED Efficiency > 130 lm/W at 1W & Fixture Efficiency >75lm/w with CRI > 75 with injection moulded Polycarbonate lens with < 80mm depth. 5 years Warranty against any manufacturing defect working under standard electrical condition LED modular down light 2'x2'-36 watts	Nos	4	8242.00	**32968.00**
	3)LED modular down light 2'x2'-55 watts	Nos	1.00	9373.00	**9373.00**
18 25/4.32	Supply of LED Square Recessed Down lighter with 18W System Wattage. Housing shall be with powder coated pressure die cast aluminum alloy with corrosion resistant polyester powder coat & with extended heat sink. Diffuser/cover made of Lexan plastic material. Rated life shall be L70 @ 50000 Hrs. which shall has inbuilt electrical protection like over/under voltage, short circuit, overload, open circuit & miswiring. Driver is on constant current driver output driver @ 0.06A with PF > 0.9 with line voltage @ 220-240V @ 50/60Hz, driver efficiency > 85% & THD<15%. LED Efficiency > 130 lm/W at 1W & Fixture Efficiency >75lm/w with CRI > 75 with injection moulded Polycarbonate lens. 5 years Warranty against any manufacturing defect working under standard electrical condition.	No	3.00	4945.00	**14835.00**
19 27/4.36. 1	LED Street light. Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs. 50000 hr. @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4 KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools.				

	LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI 75+. housing with supplier word mark / name shall be engraved / Embossing on the die cast housing / body part. . Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacturer. Suitable for A1/A2 Roads as per IS 1944 Part I & Part II.	Nos	3	31250.00	**93750.00**
20 25/4.11.2	Supplying of recessed/surface mount aesthetic 2'x2' modular luminaries made out of single piece powder coated CRCA sheet steel accommodating all electrical accessories like Energy Saving Electronic Ballast suitable to operate on 230V 50Hz AC supply with 36Watts CFL-compact fluorescent lamp, pre-wired up to terminal block with bright anodized aluminum reflector & P5 paralite louvers with spring loaded plastic toggles. 3x36Watts	Nos	4	5865.00	**23460.00**
21 25/4.30	LED Down light Supply of recess mounted rolling type LED Down light with 4/6W GU 10 LED Lamp Rib Fabricated from Die cast aluminum with white powder coated prewired to mains connector with suitable driver & having swiveling unit of aluminum die cast eye ball & LED Lamp position retained by circular wire spring. 5 years Warranty against any manufacturing defect working under standard electrical condition. LED square or round down light 5x1 watts	Nos	30.00	1428.00	**42840.00**
22 23/4.20.1	Supplying of recessed/surface mount aesthetic Square / rectangular modular luminary made out of single piece powder coated CRCA sheet steel accommodating all electrical accessories like electronic ballast suitable to operate on 230V 50Hz AC supply with 18Watts PLL-compact fluorescent lamp, pre-wired upto terminal block with bright anodized aluminum reflector & P5 paralite louvers with spring loaded plastic toggles.1x18Watts	Nos	6	1724.00	**10344.00**
	2)2x18Watts	Nos	1	1939.00	**1939.00**
23 63/7.19.1	Supplying and fixing 2mm thick perforated cable tray with powder coated paint on existing MS angle support using necessary GI bolts/nuts and washer or welding as required.150x50mm	Mtrs	50.00	443.00	**22150.00**
24 55/7.4.5	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A. 3.5 core 25 sqmm	Mtrs	100.00	165.50	**16550.00**
	6)3.5 core 35 sqmm	Mtrs	50.00	204.00	**10200.00**
	8)3.5 core 120 sqmm	Mtrs	100.00	556.80	**55680.00**
25 61/7.8.2	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct. 25 sqmm to 75 sqmm	Mtrs	150.00	16.20	**2430.00**

	95 sqmm to150Sqmm	Mtrs	100.00	21.60	**2160.00**
26 61/7.9.1	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7)In soil (ordinary)	Mtrs	100.00	78.00	**7800.00**
27 55/7.1	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia	Nos	6	2727.00	**16362.00**
28 55/7.3.1	Supplying and running of GI/Copper strips for grounding connections, using necessary fixing materials as required. GI strip	Mtrs	100.00	77.00	**7700.00**
	600x600x3mm GI Plate	Nos	6	784.00	**4704.00**
29 49/6.4.2	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete.16SWG	Sq CM	270000.00	0.33	**89100.00**
30 49/6.39.1	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint.40x40x6mm	Mtrs	25.00	263.00	**6575.00**
31	2)50x50x6mm	Mtrs	10.00	338.00	**3380.00**
32 47/6.16.6	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898.40-63 Amps SP	Nos	10	677.00	**6770.00**
	5-32 Amps DP	Nos	18.00	849.00	**15282.00**
	.40-63Amps TPN	Nos	3	1963.00	**5889.00**
33 44/6.7.2	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.32Amps	Nos	18	180.00	**3240.00**
	100Amps	Nos	12	360.00	**4320.00**
34 46/6.13.A.1	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics) FOUR POLE100Amps 25kA.	Nos	7	5809.00	**40663.00**
	8)200Amps 35kA.	Nos	2	14592.00	**29184.00**
35 45/6.11.3	Supplying of on load change over switches 4 poles, AC-23A Duty, 415V, 50Hz, AC Supply.200Amps	Nos	2	12614.00	**25228.00**

36 6.38.2	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic/FRP/DMC insulator which are mounted on powder coated 40x6mm M.S.flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete.250Amps 4x30x10mm Aluminum Strips	Mtrs	5	2942.00	**14710.00**
37 45/6.12.4	Supply and fixing of 4pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers and wiring etc., complete with AC-3 Rating and as per IS-13947. 100-125Amps	Nos	1	9915.00	**9915.00**
38 64/7.21.7	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes.25 sqmm Long Barrel	Nos	200	20.59	**4118.00**
39 48/6.27	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter.	Nos	4	1224.00	**4896.00**
40 48/6.32	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound.	Nos	6	483.00	**2898.00**
41 48/6.36	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C.	Nos	6	442.00	**2652.00**
42 62/7.12	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.40mm	Mtrs	10	345.00	**3450.00**
	65mm	Mtrs	10	585.00	**5850.00**
6.25	Supplying, fixing and wiring rotary selector switch suitable for Ammeter.	Each	4	172.00	**688.00**
6.3	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter.	Each	4	140.00	**560.00**
43 62/7.13.6	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.120Sqmm	Nos	4	1147.00	**4588.00**
43 17/3.1	Supplying and fixing hylum plastic sheet 3mm thick with necessary nitches for fixing switches, regulators etc., and fixing on existing wood or metal box using N.F. screws.	Sq CM	45000.00	0.22	**9900.00**
44 23/4.18.5	Supplying High pressure ..... Metal halide flood light luminary suitable for use with high pressure metal halide lamp with integrated control gear. The fitting shall be non corrosive high pressure die cast aluminum housing powder coated with toughened and heat resistant glass with low copper content black/grey powder coated paint finish with EPDM gasket. Reflector shall be made of high purity pre-anodized aluminum. Cable entry through a cable gland with toggle clips. IP 65 protection for both and optical and electrical compartment. Bottom cover may be with polycarbonate / tempered / toughened glass. Luminaire efficiency should be > 60% and ambient temperature > 35 deg C. High intensity discharge Electro magnetic ballast with copper winding of Octocyclic winding coil.	Nos	5	22800.00	**114000.00**

	Class H insulated dual coated copper wire. Compliance to IEC 61347-2-9 Safety and IEC 60923- performance. Winding temperature for HID ballast tw = 130 deg C and temperature rise ?T - 70 deg C. Luminaire shall be suitable to operate on 230/250Volts 50Hz AC supply finish including wiring, ignitor, condenser. SS Toggles for opening front hingeable glass, prewired to terminal block.2x400Watts				
45	Bescom Charges				159000.00
46	Miscelleneous Charges				942.00
				TOTAL RS	1310000.00

(RUPEES THIRTEEN LAKHS TEN THOUSAND ONLY)

CERTIFICATE :-

1. The place was inspected and the work is essential.
2. The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.
3. The estimate is based on KPWD (Ele) S.R. 2014-15 SR Rates.

Assistant Engineer (Ele)
Yelahanka Zone

Assistant Executive Engineer (Ele)
Yelahanka Zone

Executive Engineer (Ele)
Yelahanka Zone, BBMP